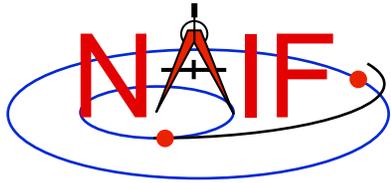


Navigation and Ancillary Information Facility

Welcome
to the
SPICE Tutorials

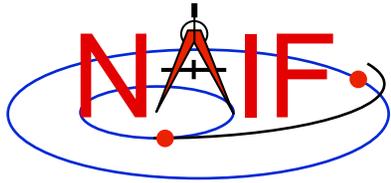
January 2012



Objectives

Navigation and Ancillary Information Facility

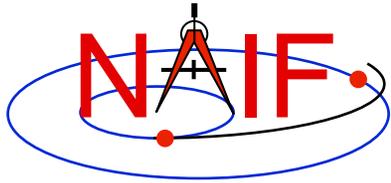
- **For you**
 - Provide an **overview** of the entire SPICE system
 - Provide a sense of the purpose and **uses** of SPICE
 - Provide an introduction to the use of primary SPICE **components**
 - Provide **examples** of how to use SPICE software and data files
 - Provide some insight into **conventions** and **common problems**
 - Provide a variety of “hands-on” **programming exercises**
 - Provide a **peek at new capabilities** being worked on or considered
 - Familiarize you with available **SPICE resources**
- **For NAIF (if these tutorials are being seen in a class setting)**
 - Get **student’s feedback** on today’s SPICE system
 - » Especially what’s hard to understand, hard to use, missing
 - Get student’s **suggestions for further development** of SPICE
 - Get student’s suggestions for **improvements to NAIF support of the space science community**



Scope

Navigation and Ancillary Information Facility

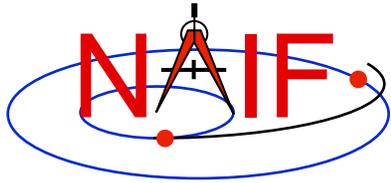
- **Broad coverage**
 - Begins at a high level, but quickly drills down to details
 - Touches on many SPICE-related topics that could be of interest to science and engineering teams
 - » Depth of discussion varies somewhat amongst topics
- **Provide information for FORTRAN, C, IDL and MATLAB programmers**
- **Some tutorials have important material provided in a “Backup” section: you should read these**
- **Some topics are addressed rather little or not at all**
 - Kernel production
 - Archiving SPICE data



Repeated Material

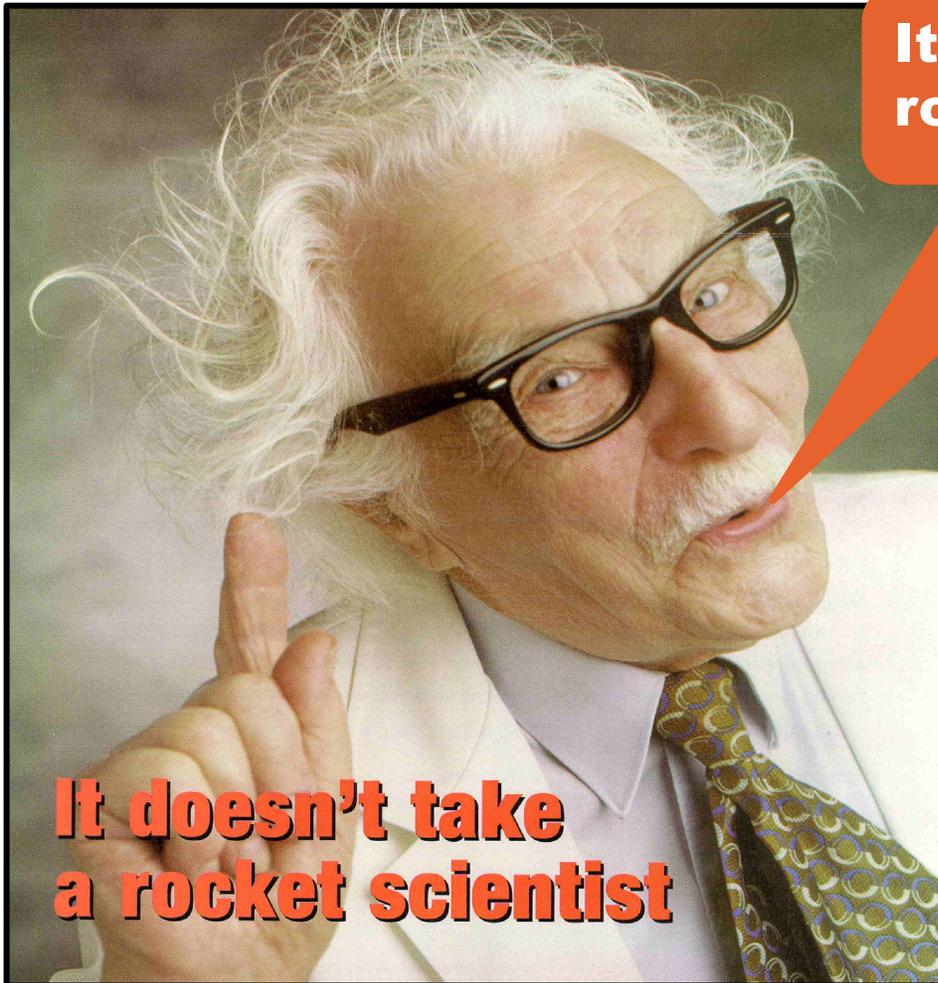
Navigation and Ancillary Information Facility

- **Some topics will be repeated in two or more tutorials**
 - **We're not trying to bore you, but...**
 - » **we don't wish to assume people will read all of the tutorials at the same time**
 - » **we think some items are sufficiently important to mention them more than once**



Your SPICE Odyssey Begins Here

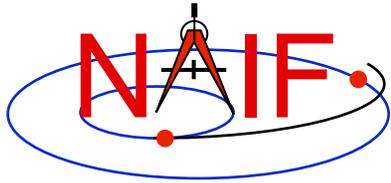
Navigation and Ancillary Information Facility



It doesn't take a rocket scientist...

... but it does take a modest amount of effort to learn enough about SPICE to begin to use its features with good success.

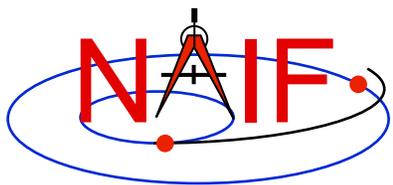
It helps to have some math skills, some innate sense of spatial orientation, and some familiarity with your computer's operating system, a code editor, and a compiler or Integrated Development Environment (IDE).



SPICE is a Large Product

Navigation and Ancillary Information Facility

- **The generic SPICE Toolkit contains:**
 - **Around 900 individual modules (subroutines)**
 - » **most customers use only a handful of these**
 - **about 13 utility and application executables (with User Guides)**
 - **about 23 subsystem reference documents**
 - **4 “cookbook” tutorial programs (with User Guides)**
and assorted other documents, scripts and libraries.
- **Don’t let this size bother you...**
... just work your way into it bit by bit.

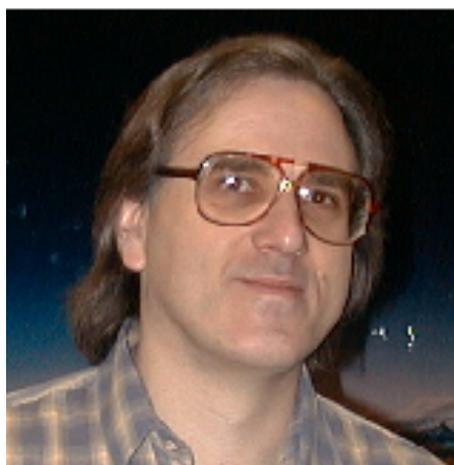


The NAIF Team at JPL

Navigation and Ancillary Information Facility



Chuck Acton



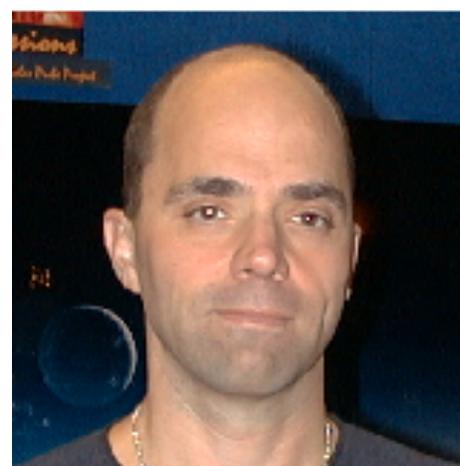
Nat Bachman



Sam Krening



Boris Semenov



Ed Wright